

Title (en)  
APPARATUS FOR MANUFACTURING STEEL-PLASTIC COMPOSITE PIPE

Title (de)  
VORRICHTUNG ZUR HERSTELLUNG EINES STAHL-KUNSTSTOFF-VERBUNDROHRS

Title (fr)  
DISPOSITIF DE FABRICATION DE CONDUITE COMPOSITE ACIER/PLASTIQUE

Publication  
**EP 2116751 A1 20091111 (EN)**

Application  
**EP 08783624 A 20080807**

Priority  
• CN 2008001438 W 20080807  
• CN 200710140523 A 20070809

Abstract (en)  
The present invention refers to a process and an apparatus for combination of steel tubes or pipes with plastic linings, in which steam is used as heat carrier to heat the steel tubes or pipes lined with linings. The apparatus comprises a multifunctional combining chamber, a multifunctional carriage for conveying tubes or pipes, an arrangement for steam circulating, which continuously supplies re-usable steam, a cooling and shaping arrangement and a controlling device. The steam circulating system comprises a furnace for re-heating the steam and means for supplying supplementing steam. The percentage of passing the qualification control is increased up to 99.9% by embodiment of the method and/or apparatus according to the present invention, while it is only 97% by a conventional apparatus, and the production capacity is increased by 15%. Thanks to the recovery and re-use of the steam in a circulating system, it will use only three tons of steam if the daily production is forty tons in a production line, and 405 RMB will be saved in a day. Thanks to the recovery and re-use of water in a circulating system, the water consumption for producing a ton steel and plastic combined tubes or pipes will be reduced by 8%. That means a remarkable economic and environmental value. The present invention will decrease the labor intensity of the workers and the cost that refers to the work time by 5%. The total cost for a ton tubes or pipes will be reduced by 10RMB.

IPC 8 full level  
**F16L 9/147** (2006.01); **B21C 37/06** (2006.01); **B29C 65/10** (2006.01)

CPC (source: EP KR US)  
**B21C 37/06** (2013.01 - KR); **B21C 37/154** (2013.01 - EP US); **B29C 35/049** (2013.01 - EP US); **B29C 63/0069** (2013.01 - EP US); **B29C 65/10** (2013.01 - KR); **F16L 9/147** (2013.01 - EP KR US); **F16L 58/1054** (2013.01 - EP US); **B29C 2035/1616** (2013.01 - EP US); **B29C 2035/1691** (2013.01 - EP US)

Cited by  
CN106733383A

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 2116751 A1 20091111**; **EP 2116751 A4 20130501**; **EP 2116751 B1 20170308**; AU 2008286151 A1 20090212; AU 2008286151 B2 20131010; CA 2695459 A1 20090212; CA 2695459 C 20171212; CN 101303096 A 20081112; JP 2010535648 A 20101125; JP 5326176 B2 20131030; KR 101220781 B1 20130109; KR 20090127942 A 20091214; NZ 583167 A 20121130; RU 2010104284 A 20110920; RU 2451860 C2 20120527; US 2010089517 A1 20100415; US 8146639 B2 20120403; WO 2009018721 A1 20090212; ZA 201000898 B 20101027

DOCDB simple family (application)  
**EP 08783624 A 20080807**; AU 2008286151 A 20080807; CA 2695459 A 20080807; CN 200710140523 A 20070809; CN 2008001438 W 20080807; JP 2010519325 A 20080807; KR 20097022552 A 20080807; NZ 58316708 A 20080807; RU 2010104284 A 20080807; US 52573708 A 20080807; ZA 201000898 A 20100208